

NO-A190 996

1987 GORDON RESEARCH CONFERENCE ON NEURAL PLASTICITY  
(U) GORDON RESEARCH CONFERENCES INC KINGSTON RI  
D NILSON 82 OCT 87 AFOSR-TR-87-1564 AFOSR-87-0261

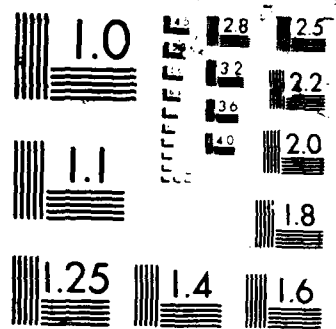
1/1

UNCLASSIFIED

F/G 6/4

NL





## REPORT DOCUMENTATION PAGE

AD-A190 996

1b RESTRICTIVE MARKINGS

DTIC FILE CODE

3 DISTRIBUTION/AVAILABILITY OF REPORT

Approved for public release; distribution unlimited.

4 PERFORMING ORGANIZATION REPORT NUMBER(S)

5 MONITORING ORGANIZATION REPORT NUMBER(S)

AFOSR-TR- 87-1564

6a. NAME OF PERFORMING ORGANIZATION

Gordon Research Conferences

6b OFFICE SYMBOL  
(If applicable)

INC

7a. NAME OF MONITORING ORGANIZATION

Air Force Office of Scientific Research/NL

6c. ADDRESS (City, State, and ZIP Code)

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Kingston, RI 02881

7b. ADDRESS (City, State, and ZIP Code)

Building 410  
Bolling AFB, DC 20332-64488a. NAME OF FUNDING/SPONSORING  
ORGANIZATION  
AFOSR8b OFFICE SYMBOL  
(If applicable)  
NL

9 PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER

AFOSR-87-0261

8c. ADDRESS (City, State, and ZIP Code)

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10 SOURCE OF FUNDING NUMBERS

PROGRAM  
ELEMENT NO.  
61102FPROJECT  
NO.  
2312TASK  
NO.  
A1WORK UNIT  
ACCESSION NO

11 TITLE (Include Security Classification)

1987 Gordon Research Conference on Neural Plasticity

12 PERSONAL AUTHOR(S)

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13a TYPE OF REPORT  
Final13b TIME COVERED  
FROM 15 Jul 87 TO 7 Aug 8714. DATE OF REPORT (Year, Month, Day)  
87 Oct 215 PAGE COUNT  
10

16 SUPPLEMENTARY NOTATION

17 COSATI CODES

FIELD	GROUP	SUB-GROUP

18 SUBJECT TERMS (Continue on reverse if necessary and identify by block number)

Neural Plasticity

19 ABSTRACT (Continue on reverse if necessary and identify by block number)

The Gordon Conference on Neural Plasticity was held on July 20-24, 1987 at Brewster Academy in Wolfeboro, New Hampshire, as planned. About 90 persons attended the meeting. The poster session, consisted of more than 20 posters and was well attended. A number of graduate students and postdoctoral researchers were able to present their results in that session. The Conference offered an excellent opportunity for researchers in a wide variety of fields within the neurosciences to exchange ideas and their latest research results in a setting that promoted informal, as well as formal, interactions. There was ample opportunity for detailed discussions that occupied the hours beyond formal meeting times.

20. DISTRIBUTION/AVAILABILITY OF ABSTRACT

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21. ABSTRACT SECURITY CLASSIFICATION

UNCLASSIFIED

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FINAL REPORT

Air Force Office of Scientific Research  
Grant No. AFOSR-87-0261

**AFOSR-TR. 87-1564**

GORDON CONFERENCE ON NEURAL PLASTICITY

Principal Investigator: Alexander M. Cruickshank  
Conference Chairperson: David Wilson  
College of Arts and Sciences  
University of Miami  
P. O. Box 248004  
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The Gordon Conference on Neural Plasticity was held on July 20-24, 1987 at Brewster Academy in Wolfeboro, New Hampshire, as planned. Attached is a list of the sessions and speakers at the Conference. It differs little from the proposal version. Two speakers were changed because of late withdrawals.

About 90 persons attended the meeting. The poster session, held after the keynote speech by Eric Kandel on Monday, consisted of more than 20 posters and was well attended. A number of graduate students and postdoctoral researchers were able to present their results in that session.

The Conference offered an excellent opportunity for researchers in a wide variety of fields within the neurosciences to exchange ideas and their latest research results in a setting that promoted informal, as well as formal, interactions. There was ample opportunity for detailed discussions that occupied the hours beyond formal meeting times.

In a field such as neural plasticity, the research interests of the group are very diverse. The meeting was an ideal way to remain current in neighboring areas of research. The opportunity for cross-fertilization was great.

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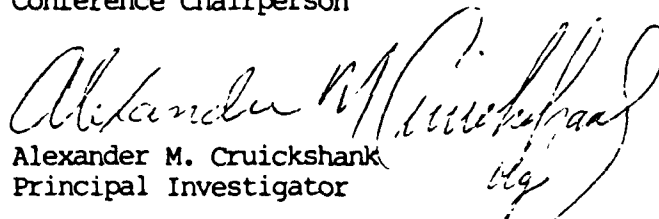
L2 OCT 1987

It is anticipated that another conference on this topic will take place in 1989, as participants expressed great enthusiasm for its continuation.

We are most grateful for your support, which contributed significantly to the success of the 1987 Conference.



David Wilson  
Conference Chairperson



Alexander M. Cruickshank  
Principal Investigator

8/7/87



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JORDON RESEARCH CONFERENCE ON NEURAL PLASTICITY

Brewster Academy, Wolfeboro, New Hampshire July 20-24, 1987

DAY 9:00 AM Cell-Surface Molecules and Plasticity

Discussion Leader: Monte Westerfield (Inst. of Neuroscience, Univ. of Oregon)

Greg Cole (University of Miami School of Medicine)

Characterization of the heparin-binding domain of NCAM

Urs Rutishauser (Dept. of Developmental Genetics and Anatomy, Case Western Reserve University)

NCAM and the control of cell-cell interactions

John Covault (Biological Science Group, Univ. of Connecticut)

Expression of cell-surface molecules during reinnervation of skeletal muscle

7:30 PM Cell and Molecular Biological Approaches to Short and Long-Term Memory

Keynote Speaker: Eric Kandel (Center for Neurobiology and Behavior, Columbia University)

to be followed by poster session

TUESDAY 9:00 AM Refinement and Alignment of Neural Maps

Discussion Leader: Carla Shatz (Dept. of Neurobiology, Stanford Univ.)

Eric Knudsen (Dept. of Neurobiology, Stanford Univ.)

The role of experience in the development and maintenance of the map of auditory space

Michael Merzenich (Dept. of Otolaryngology and Physiology, Univ. of California, San Francisco)

Reorganization of somatosensory maps in adult mammalian cerebral cortex following peripheral nerve injury

John Schmidt (Dept. of Biological Sciences, SUNY, Albany)

The role of activity in refinement of topographic maps in goldfish retinotectal system

TUESDAY 7:30 PM     Regulation of Neurotransmitter Synthesis

- Discussion Leader: Richard Zigmond (Dept. of Pharmacology, Harvard Medical School)
- Ann Rittenhouse (Dept. of Pharmacology, Harvard Medical School)  
Long-term and short-term regulation of ganglionic tyrosine hydroxylase activity produced by nerve stimulation
- Jack Waymire (Dept. of Anatomy and Neurobiology, U. of Texas Med. Sch.)  
Phosphorylation and activation of tyrosine hydroxylase in chromaffin cell cultures
- Larry Swanson (Salk Institute)  
Neural and hormonal regulation of neuropeptide levels in the hypothalamus

WEDNESDAY 9:00 AM     Learning and Memory--Hippocampus, etc.

- Discussion Leader: Willem Gispen (Institute of Molecular Biology, University of Utrecht)
- Robert Isaacson (Dept. of Psychology, SUNY, Binghamton)  
Methodological issues in evaluating hippocampal contributions to learning and memory
- F.H. Lopes da Silva (University of Amsterdam)  
Is long-term potentiation a model for learning and memory?
- Oswald Steward (Dept. of Neurosurgery, U. of Virginia School of Med.)  
Protein synthesis at the postsynaptic site; its role in synapse growth and modification
- Paul Gold (Dept. of Psychology, University of Virginia)  
Humoral factors and learning and memory

WEDNESDAY 7:30 PM     Hormonal (and Neuroactive Substance) Modulation of Circuits

- Discussion Leader: Peter Getting (Dept. of Biophysics, U. of Iowa)
- Eve Marder (Dept. of Biology, Brandeis University)  
Peptidergic modulation of a neuronal circuit
- Glenn Hatton (Dept. of Psychology, Michigan State University)  
Plasticity in chemical and non-chemical synapses in mammalian peptidergic neurons
- Steven Jones (Dept. of Physiology, Case Western Reserve)  
Neurotransmitter modulation of cellular properties

THURSDAY 9:00 AM     Cellular and Molecular Analysis of Neuronal Plasticity

- Discussion Leader: Tom Carew (Dept. of Psychology, Yale University)
- Dan Madison (Yale University Medical School)  
Neurotransmitter modulation of ionic currents in hippocampal pyramidal cells
- Thomas Brown (Div. of Neurosciences, City of Hope Research Institute)  
A cellular analysis of long-term potentiation
- Steven Siegelbaum (Center for Neurobiology, College of Physicians and Surgeons, Columbia University)  
Role of channel modulation in synaptic plasticity

THURSDAY 7:30 PM     Plasticity of the Vestibulo-ocular Reflex: Behavior, Circuits and Putative Modifiable Synapses in the Behaving Primate

Discussion Leader: Stephen Lisberger (Dept. of Physiology, UCSF)  
Fred Miles (Dept. of Biology, City College of CUNY)  
    The vestibulo-ocular reflex as a model system for investigating  
    brain mechanisms of plasticity in the adult primate  
Steven Highstein (Dept. of Otolaryngology, Washington University)  
    Brainstem and cerebellar circuits underlying the vestibulo-  
    ocular reflex in monkeys  
Stephen Lisberger (Dept. of Physiology, UCSF)  
    Changes in brainstem circuits underlying plasticity of the  
    vestibulo-ocular reflex in monkeys  
Yasushi Miyashita (Dept. of Physiology, University of Tokyo)  
    Plasticity in cerebellar cortex?

FRIDAY 9:00 AM     Multiple Kinases

Discussion Leader: Mary Kennedy (Division of Biology, California  
  Institute of Technology)  
Irwin Levitan (Dept. of Biochemistry, Brandeis University)  
    Modulation of ion channels by cAMP-dependent protein kinase  
Leonard Kaczmarek (Yale University School of Medicine)  
    Modulation of ion channels by the C-kinase  
Mary Kennedy (Caltech)  
    Potential roles of calmodulin-dependent protein kinases in the  
    nervous system

Chairperson: David L. Wilson (College of Arts and Sciences,  
  University of Miami)

Vice-Chairperson: Carla Shatz (Dept. of Neurobiology, Stanford Univ.)



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